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NAVY DEPARTMENT

BUMED NEWS LETTER

a digest of timely information

Editor - Captain F. W. Farrar, (MC). U.S.N.

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Circular Letters:

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Notes on Observations and Studies Made on the Effects of Atomic Bomb Explosions at Hiroshima and Nagasaki: Captain Shields Warren (MC), USNR, together with other Medical Department personnel under the direction of the Naval Medical Research Institute, Bethesda, Maryland, working with the Naval Technical Mission to Japan, made a study of the biological effects of atomic bombs dropped at Hiroshima and Nagasaki. Captain Warren's group had the valuable collaboration of the investigators from the Manhattan District under Colonel Stafford L. Warren and the Joint U. S. Army Imperial Japanese Government Atomic Bomb Commission under the direction of Colonel A. W. Oughterson.

These notes constitute the material that can be released from Doctor Warren's report and are essentially the same as presented by him at a meeting at the National Naval Medical Center, Bethesda, Maryland, and before the American Association for Cancer Research at Atlantic City.

A distinctive feature of the atomic bomb is the large amount of radiant energy which it produces. Although this energy covers a wide range of the electromagnetic spectrum, its chief biological effects may be divided into two groups: first, the effects of heat, producing thermal injuries of the flash-burn type, and thermal injuries resulting from induced fires; second, the effects known through experimental studies of the biologic effects of X-rays. This radiant energy was produced in an instant.

Combined with and modifying and obscuring the thermal and radiation injuries are the more usual effects of the conventional types of bombs. Air-blast injury was usually of the secondary type due to flying debris or impact against fixed structures, producing fractures and ruptures of viscera.

The blast was highly destructive not only to the Japanese type of building which is of flimsy wood with a heavy tile roof, but to modern steel factory construction as well. Great numbers of people were pinned beneath the heavy tile roofs of the Japanese houses as they collapsed, and were crushed or trapped.

The direction of the destructive effect of the blast was centrifugal except at the hypocenter (the projection of the true center on the ground) where it was essentially vertically downward. Some poles and trees remained standing at the hypocenter because of their small cross section presented to the blast force. Those elsewhere were extensively leveled. The importance of streamlining in resistance to blast was well shown by factory smokestacks, the great majority of which withstood the shock.

The thermal effects were striking in their intensity and in the briefness of the period during which they occurred. Thus clothes, wisps of hair, or

even an arm gave protection to the part of the body it shadowed. The intensity of the heat and the instantaneous character of the flash are well brought out by photographs which show the profile of blades of grass in relief against the burned background of a board bunker. The instantaneous and intense radiant heat burned the wood before the grass had time to wither or wave.

Many of the flash burns were of second or third degree, and their treatment so inadequate that serious contractures developed in the survivors.

With the sweep of fire that fed on the shattered wooden buildings, many secondary burns, from minor to fatal, were received by those trapped in the region as well as by those attempting salvage or rescue.

In studying the patients it became apparent that there could be no clear segregation of the types of injury among them, but that an individual might well be suffering from blast effect, thermal injury and radiation injury simultaneously. Of the 80,000 people who died at Hiroshima and 45,000 who died at Nagasaki, it is very difficult to say what proportion was killed by one or another type of energy. Those persons who died as a result of short-wave radiation or neutron effects are of primary interest. Since the biologic responses produced by these different types of energy are essentially similar, they will be considered together.

The characteristic clinical course of those persons primarily suffering from radiation injury as a result of the atomic bomb explosions may be divided into two stages. The immediate effects were manifested as weakness, malaise, fever and often death, and appeared usually within 48 hours; the delayed effects were manifested in a variety of ways.

The disorganization of the Japanese was so great that no adequate material exists to determine the exact nature of the immediate effects. It may be assumed, however, that immediate effects would parallel experimentally induced changes in animals and represent the syndrome of radiation sickness carried to an extreme degree. It may also be assumed that little morphologic evidence other than leukopenia and loss of adrenal lipoid would be present.

Material on the delayed effects was much better. Study was made to determine the presence of any possible radiation effects in the blood, hemopoietic structures, and the gonads which are known to be particularly irradiation-sensitive and in the hair follicles which are irradiation-sensitive to an appreciably lesser degree. Many of the patients showed evidences of injury of the irradiation-sickness type. In this group in addition to weakness, anorexia and weight loss, diarrhea was a prominent feature. Because the public health facilities of the region were totally

disrupted and both bacillary and amebic dysenteries were prevalent, it was extremely difficult to determine the cause of this diarrhea.

Excellent cooperation was received from the Japanese authorities in studying survivors. Over 800 were hospitalized by Doctor Warren's group at the Omura Naval Hospital, and about 13,000 were made available for a casualty survey.

In the cities and villages around Nagasaki and Hiroshima it was easy to pick out the victims of radiant energy by the characteristic flash burns and by the frequent occurrence of epilation which they presented. Scalp hair was lost while that of eyebrows, beard, axillae and pubis persisted. In many epilated persons some degree of regeneration of new downy hair was beginning to appear four months after the bombing.

The effect on the blood can be readily observed from the clinical manifestations as well as from the laboratory findings.

There were three chief groups of symptom complexes resulting from damage to hemopoietic tissue. Although the groups overlapped to some degree, they were quite distinctive.

The first was the leukopenic group in which infection, particularly a Ludwig's type of angina, was the outstanding manifestation. The great bulk of leukopenic deaths occurred during the first three weeks following the bombing. Judging from the studies of Japanese investigators, the leukocytes in the circulating blood were destroyed at the same time that the hemopoietic tissue was damaged, so that white blood cell counts as low as 200 per cubic millimeter were found in the first few days.

The second was the thrombocytopenic group. From three to five weeks after the bombing a considerable number of hemorrhagic deaths occurred as a result of the thrombocytopenia caused by radiation damage to the megakaryocytes of the bone marrow. Although data is lacking, the absence of hemorrhagic deaths in the early days suggests that the blood platelets in the circulation were not destroyed by the radiation, and that only as a low count in the blood was reached as a result of failure in the production and supply to the blood of an adequate number of thrombocytes did hemorrhagic manifestations occur. These ranged from extensive ecchymoses to purpuric patches and small petechiae. Some persons had massive hemorrhages from various body orifices. At autopsy, hemorrhage filling the pelvis of the kidney, multiple mucosal hemorrhages of the stomach or elsewhere in the gastro-intestinal tract and multiple diffuse hemorrhages in the meninges or even in cerebral substance were a frequent finding.

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The third was the anemic group. Those with serious bone-marrow damage who weathered the first few weeks showed later manifestations of anemia with red blood cell counts in some instances dropping to one million or below. Some bone marrows as shown by sternal biopsy were extremely hyperplastic, while others were aplastic. The hemopoietic tissue attempts to regenerate sometimes to such a degree that a pseudoleukemic pattern appears in the sternal marrow biopsy. In relation to the aplastic group there was one point of interest. Red marrow is commonly thought to be active hemopoietic marrow in contrast to the yellow fatty marrow. In many of these cases the aplastic marrow was red, but its redness was due only to sinusoidal hyperemia and there was no appreciable formation of blood elements. At times the marrow was so depleted that little but reticulo-endothelial cells appeared.

The gonadal effect was much more prominent in the testis than in the ovary as would be expected. Although a random sample of high school girls, who previously had been menstruating regularly, showed suppression of menstruation in a considerable number, the probability of psychic shock and malnutrition must be weighed as well as the direct effect by radioactivity on the ovaries. Ova were present in the ovaries of many seen at autopsy. Only occasionally did atrophy occur in women of the childbearing age. However, it was relatively infrequent to find a recent corpus hemorrhagicum or corpus luteum. In the testis, on the other hand, atrophy of the germinal epithelium was striking in those individuals who had been exposed to appreciable amounts of radioactivity. Spermatogenesis was suppressed and frequently the tubules were represented only by Sertoli cells and thickened membranes. The interstitial cells appeared to be undamaged.

The question of injury from residual radioactivity was of major importance. A study was made on a number of persons who had entered the bombed areas soon after the explosion and had remained there. No deleterious effects were observed.

The treatment given by the Japanese was inadequate, as were their hospital facilities. Blood transfusions were not used. Little more than supportive treatment was given. Burns were treated with oily dressings or picric acid. Repeated blood transfusions and penicillin to control infection during the leukopenic period should have materially reduced the number of deaths.

It will probably be necessary to follow the populations of Hiroshima and Nagasaki for many years to determine the long-range results in the production of any blood dyscrasias, in the alteration of resistance to disease and in the genetic changes induced by this instantaneous dose of radioactivity.

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Activation of Tissue Elements by Slow Neutron Exposure: When tissue is exposed to slow neutrons, reactions take place between the neutrons and the nuclei of the various atoms occurring separately and making up the molecular structure of the tissue. As a result of these reactions, energy is released within the tissue in the form of various types of radiation, and radioactive isotopes are produced which slowly decay and release further energy within the tissues.

This study concerns itself with the production within the tissue of isotopes of phosphorus, sodium, potassium and chlorine. Calculations can now be made of the quantities of these isotopes formed and their biological effects. These have been checked experimentally in two ways. In the first place, mice were exposed to slow neutrons from the Clinton graphite pile, and the exposures monitored by means of copper or indium foils. The animals were sacrificed at some definite time after exposure and various tissues analyzed quantitatively for phosphorus atomic weight 32, sodium atomic weight 24, potassium atomic weight 41 and chlorine atomic weight 38. In all cases the amount predicted within the limits of experimental error was found. Next, rats were exposed to slow neutrons, and the excreta examined for phosphorus atomic weight 32 and sodium atomic weight 24. From an analysis of the diet, the radioactive sodium excretion was as predicted, assuming the excretion to be a true aliquot of all of the sodium in the body. About one-third of the phosphorus activated in this way was excreted as an aliquot of the total body phosphorus, about one-third was excreted only slowly and the remainder appeared to be immobile. (Federation Proc. (Federation Am. Soc. Exper. Biol.), Feb. '46 - Curtis and Teresi)

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Early Postoperative Rising: In June 1942, a critical study of early ambulation in patients undergoing major abdominal surgery was undertaken at the Peter Bent Brigham Hospital in Boston. The preliminary results observed in 681 cases in this study analyzed for postoperative complications and their causative factors are reported upon by Blodgett and Beattie.

In this study, "early rising" was defined as rising and walking on the first or second postoperative day; "late rising" was defined as remaining in bed at least one week after operation.

The study compared 238 consecutive cases in which early rising was practiced with 443 in which late rising was practiced.

The technic of getting the patients up from bed was modeled after Leithauser. The patient was turned upon the side on which he had his incision. The hips and knees were flexed. Thus the knees and lower legs were brought to the edge of the bed. The patient was then raised sideways to a

sitting position on the side of the bed. The advantage of sitting up in this manner was that the patient assisted in raising himself; he used the flank muscles on the side opposite from his wound. As the patient sat on the side of the bed his shoes were put on, and then he stood up on a footstool. While standing on the footstool, he was encouraged to breathe deeply and to cough several times after deep inspiration. This procedure was less painful than when the patient coughed in bed and was often effective in raising mucous plugs from the bronchi. He was then encouraged to walk 8 or 10 feet before sitting in a chair. On the first rising the patient remained in the chair about ten minutes, and then returned to bed in the same manner as he rose. He was made to get up from bed twice each day. Usually by the third or fourth day he needed little or no assistance and could rise at will. The patient was encouraged to move freely about in bed and to breathe deeply several times each hour.

The patients who rose early were considerably stronger and had less pain in their wounds than the others. They were able to care for themselves on about the fourth postoperative day and were ready for discharge considerably earlier than the control group. Although no patients were sent home before the seventh to ninth postoperative day in order to allow time for the possible appearance of wound infection or disruption, 64 per cent of the early-rising patients were discharged before the 13th postoperative day while only 26 per cent of the control group were discharged by this time.

The incidence of wound disruption and wound infection was reduced in the early-rising group. "Wound disruption" was defined as any wound in which the fascia was shown to have separated whether or not the peritoneum remained intact. Among early-rising patients there was 1.1 per cent of wound disruption whereas in the late-rising patients, there was 2.8 per cent incidence of wound disruption. The incidence of wound infection among the early-rising patients was 2.7 per cent as compared with 5.7 per cent in the patients who rose late. This group included all types of infection including stitch abscesses. All of the wound infections in both series appeared in patients with potentially contaminated wounds.

The incidence of pulmonary complications was somewhat lower in the early-rising group. The diagnosis of atelectasis was made on patients on a clinical basis if there was a postoperative rise in temperature associated with rales and an elevated respiratory rate in the absence of other demonstrable cause for fever. The diagnosis was also made if there was X-ray evidence of atelectasis. The incidence in the group rising the first day was 4.3 per cent and 6.3 per cent in the late-rising group. This reduced incidence of postoperative atelectasis may have been due to increased respiration and more effective coughing, especially when the patient was standing and his diaphragm could descend to lower levels.

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The familiar greater incidence of atelectasis in upper abdominal vertical wounds was seen in both groups when the cases were divided with respect to the location of the abdominal wound. It was significant that no case of atelectasis occurred in the patients with low abdominal wounds who rose on the first day.

Although the incidence of atelectasis in males who remained in bed was high, it was unusually low in those who rose on the first day after operation. The incidence among the females of the two groups was essentially the same. There was no significant variation in the incidence of atelectasis in either group whether ether or spinal anesthesia was used. The influence of the age factor repeated the familiar pattern of increasing incidence of atelectasis with advancing age in both groups. Since atelectasis most frequently appears during the first 48 hours after operation, it is best to get the patient up from bed as soon as possible within that period if rising is to have a significant effect on preventing atelectasis.

Pneumonia was such an infrequent complication that it did not permit comparative analysis.

The incidence of phlebitis or phlebothrombosis of the deep veins in the legs was somewhat greater in the early-rising group, with 3.2 per cent as compared with 1.8 per cent in the late-rising group. The term "phlebitis" is used in this discussion to include both silent thrombosis (phlebothrombosis) and deep phlebitis of the legs. The diagnosis of deep-vein phlebitis of the legs was made on the basis of tenderness in the calf muscles, associated usually with one or more other signs, i.e., a positive dorsiflexion (Homans') sign, edema of the lower leg, or a rise in pulse rate, temperature or white count. Also, if the patient had pulmonary infarction or embolism in the absence of heart disease, a presumptive diagnosis of phlebitis was made.

There was no phlebitis recorded in any patients with the McBurney incision whether they rose early or not. The females had a higher incidence of phlebitis than the males in the first-day-rising group. The highest incidence of phlebitis in the late-rising group was in the patients of 60 years or more, but in the early-rising patients, the highest incidence was in the group between 30 and 60 years.

Early rising is apparently not the answer to the problem of postoperative venous thrombosis.

There may be certain precautions which can be observed to minimize calf-muscle trauma when patients rise from bed. These are, however, equally important at any time in the postoperative period.

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It was considered that the most remarkable observation from this study is that postoperative activity tends to maintain the patient's strength and endurance whereas prolonged rest leads to increasing weakness and muscle atrophy. It also appears that muscle activity in the region of the wound has the tendency to reduce the period of wound tenderness, but it does not increase the incidence of wound disruption. (Surg., Gynec. & Obst., April '46)

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Persistent Ventricular Bigeminal Rhythm in Apparently Normal Hearts: From a study of persons with ventricular bigeminal rhythm, Sesenbach and Buie conclude:

1. Bigeminal rhythm due to premature ventricular contractions may occur in the absence of heart disease and in the absence of digitalis intoxication or other detectable cause.

2. Bigeminal rhythm occurs commonly in those individuals with irregularly occurring premature ventricular beats, in which cases the coupling of the beats usually occurs only in short intermittent periods. Less commonly, it may be constant and persist for weeks or months. That the latter may occur in individuals with normal hearts is a fact not generally recognized.

3. Bigeminal rhythm occurs most frequently in females and is apparently related in most instances to some emotional disorder. Usually when the emotional disturbance is eliminated, the arrhythmia disappears.

4. The mechanism of production of the arrhythmia in otherwise normal individuals is unknown. (Am. J. M. Sc., March '46)

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Therapeutic Effect of L. Casei Factor in Experimental Granulocytopenia Produced by Thiourea and Thyroxin: A study by Daft et al. of the National Institute of Health, U. S. Public Health Service, Bethesda, Maryland, was summarized by the authors as follows:

Rats given thiourea in a purified diet develop anemia and, in lesser incidence, leukopenia. They also develop hemorrhage and necrosis of the adrenals. Animals which receive, concomitantly, thyroxin injections or thyroid powder become granulocytopenic and leukopenic, while the incidence of anemia

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and of adrenal hemorrhage and necrosis is greatly reduced. The granulocytopenia and leukopenia of these rats may be corrected by treatment with the L. casei factor. (Proc. Soc. Exper. Biol. and Med., Feb. '46)

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St. Louis Encephalitis Virus in the Blood of Experimentally Inoculated Fowls and Mammals: From a study of the experimental inoculation of fowls and mammals with the virus of St. Louis encephalitis, Hammon et al. conclude:

1. Of three species of mammals tested by peripheral inoculation (guinea pig, cat, and horse) none showed viremia under conditions which suggested that any of these species would serve as a frequent source of mosquito infection.

2. Of the birds tested (chicken, duck and dove) all developed viremia and might readily serve as natural sources of mosquito infection. Chickens were shown to be very highly susceptible to infection by minute amounts of virus inoculated subcutaneously.

3. Virus has appeared in the blood of chickens within 16 hours after inoculation, and it has persisted until at least the 120th hour. No fowl showed any sign of illness as a result of the infection. (J. Exper. Med., March '46)

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Treatment of Neurosyphilis with Penicillin: This is a study based on 197 patients with neurosyphilis treated with penicillin and followed for more than 120 days.

Definite improvement in spinal fluid occurred in 74 per cent, and normal and near-normal spinal fluids were achieved in 36 per cent of the total series of neurosyphilitic patients without regard to diagnostic category. Paretics showed a 62 per cent definite improvement but no negative fluids. Normal and near-normal fluids were, however, obtained in 39 per cent of paretics and taboparetics combined, 57 per cent of tabetics, 60 per cent of asymptomatic neurosyphilitics, 45 per cent of meningovascular syphilitics and 63 per cent of congenital neurosyphilitics. In the entire series, 6 fluids (3.5 per cent) became worse. Over-all clinical improvement of some degree occurred in 65 per cent of asymptomatic neurosyphilitics, 24 per cent improved strikingly, 41 per cent improved slightly and 9 per cent became worse. Thirty per cent of paretics, 31 per cent of tabetics and 17 per cent of meningovascular cases improved markedly.

Surprisingly little difference in therapeutic effect is observable between low dosage (1.2 to less than 4.8 million units) and high dosage (4.8 to 10 million units and over). However, there is a slight trend toward superiority in the

higher dosage bracket. So far there is no conspicuous good effect demonstrable from mere repetition of courses, but the prolongation of the good effect of one course is striking. The good effect of penicillin on the spinal fluid is continued over weeks and months after administration. The maximum effect is usually secured in the first 120 days; but improvement and final normality may follow even an unsatisfactory or atypical early trend. Asymptomatic neurosyphilis most often exhibits the maximum effects in 120 days; paresis does so the least often. Relapse may occur in fluids that have become negative, but relapse to the original formula or severity has not occurred in this series.

A comparison such as this, between results from a cooperative clinical group using older methods including chemotherapy and fever therapy, and results with penicillin observed by the authors suggests that treatment with penicillin will be found after further experience to equal or exceed the efficacy of malariotherapy either alone or following chemotherapy. In asymptomatic neurosyphilis, penicillin ranks far above other methods as a reducer of the spinal fluid to or towards normal. A single course of not less than 4.8 million units given regularly throughout the 24 hours of each day for not less than 7.5 days, using penicillin sodium in saline solution intramuscularly, will in the authors' experience make the best start and usually an adequate total therapy for the majority of cases of neurosyphilis. Observation should be carried over at least a year in the absence of convincing evidence of progression before the effects are evaluated and further measures adopted. (OEMcmr-403, Stokes and Steiger, Univ. of Pa., MS. for publication - CMR Bulletin #75)

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Nitrite Protection Against Experimental Cyanide Poisoning: It has been demonstrated that nitrites, with thiosulfate, afford a definite protection against injected cyanide. The mechanism involves the formation of methemoglobin in the circulating erythrocytes.

This work has been extended to hydrocyanic acid in gaseous form. Dogs, maximally protected, show no obvious symptoms for over an hour in an atmosphere so concentrated in cyanide that the control (unprotected) animal succumbs within 2 minutes. When protected dogs finally lose consciousness, they recover much more rapidly when rescued than do unprotected animals. The unprotected ones frequently fail to recover. (OEMcmr-51, Bass and Salter, Yale Univ. - CMR Bulletin #74)

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Modification of Anaphylaxis by Benadryl: A study was undertaken by Wells et al. to determine the effectiveness of Benadryl (beta dimethylaminoethyl benzhydryl) in the prevention of anaphylactic shock in experimental animals.

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The intravenous injection of Benadryl (10 mg. per kilo) into horse-serum-sensitized dogs prior to the reinjection of horse serum reduces the severity of anaphylactic shock in these animals with no deaths resulting in 22 animals as against 9 deaths resulting in 26 controls. As Benadryl has a similar modifying effect upon the shock induced by the injection of histamine, the results of these experiments are consistent with the theory that histamine plays a significant role in anaphylaxis in dogs. Unfortunately, Benadryl merely reduces, but does not obliterate, the vasodepressor effects of histamine, and thus the present experiments with Benadryl do not permit conclusions as to whether histamine is or is not the sole vasodepressor factor in anaphylaxis in the dog. (Proc. Soc. Exper. Biol. and Med., Feb. '46)

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Immunity and Cross Immunity in Homologous Serum Hepatitis and Infectious (Epidemic) Hepatitis: In the November issue of the American Journal of Medical Sciences, Neefe, Stokes and Gellis made a preliminary report of the results obtained in an experimental study in humans of immunity and cross immunity to the infective agents of homologous serum hepatitis and infectious (epidemic) hepatitis.

Homologous serum hepatitis and infectious epidemic hepatitis have several characteristics in common. Both etiological agents pass through bacterial filters and are not destroyed by heat at 56° C. for 30 minutes. Both also produce similar clinical manifestations. However, with infectious hepatitis the patient's temperature is elevated above 100 degrees, transmission is common and the causative agent is found in the feces. Infectious hepatitis may be prevented or attenuated by means of human immune serum, globulin, or human adult plasma. The presence or absence of cross immunity between infectious hepatitis and homologous serum hepatitis has not been established. Six human volunteers recovered from homologous serum hepatitis and later failed to develop any acute clinical manifestations upon reinoculation with the same causative agent, whereas 8 of 9 volunteer normal controls developed hepatitis and jaundice. The 6 volunteers who had recovered from homologous serum hepatitis were next inoculated with material containing the etiological agent of infectious hepatitis, and as a result 5 again developed hepatitis. Controls inoculated orally contracted epidemic hepatitis, but the controls which were inoculated parenterally did not develop the disease. The incubation period of serum hepatitis exceeded 60 days, whereas that of infectious hepatitis did not exceed 37 days.

The authors believed that the lack of cross immunity between the two diseases resulted from differences in the antigenic properties of the two etiologic agents. (Surg., Gynec. and Obst., April '46 - Shafiroff)

Penicillin Production: Development of New Strain of Mold: Research workers of the University of Wisconsin have developed a new strain of mold which opens the possibility of doubling the nation's supply of penicillin.

The new mold was developed by two botanists who exposed the spores of the penicillin-producing mold to ultraviolet rays. Ultraviolet irradiation causes incompletely understood and unpredictable changes in the genes of seeds and spores with resultant changes in the characteristics of the plants or fungi springing from them.

Because the new strain known as Q176 has not been patented, soil cultures of it are being supplied gratis on request to penicillin manufacturers in this country and in England, France, China and other countries. Many are already using it in their fermentation tanks.

Q176 is considered to be a major step forward in bringing supply into line with the increasing need for penicillin. American production in December 1945, for instance, was 700 billion units, or something over 1,000 pounds of the powdered sodium form of the pure chemical, but it was still short of demand for human use in this country by at least 100 billion units. And, meanwhile, demand also is rising rapidly for veterinary use in the United States, while the need of the rest of the world is just beginning to manifest itself.

In 1940 the original British workers were getting about two units of penicillin from every cubic centimeter of the broth in which the mold is cultured. After it was brought to this country, efforts raised the production figure to about fifty units by August 1942. About that time a stock laboratory culture known as NRRL-832 was found which made it possible to grow the mold in large aerated tanks instead of on the surface of shallow flasks. With that strain and with the surface strains the United States went into major production in 21 plants. Yields slowly increased to about 100 units, while an organized effort to find new strains was begun.

The next step was the study of a strain of Penicillium chrysogenum on the stem of a spoiled melon contributed by a Peoria housewife to the Northern Regional Research Laboratory. Early tests of this culture which became known as NRRL-1951 jumped production still further, and with further refinement of a natural variant known as NRRL-1951-B25, production in one typical test series increased to an average of 169 units, with a high of 245.

Meanwhile efforts were begun in several laboratories to develop other varieties by artificial means such as X-rays, ultraviolet rays or chemicals.

A group of promising spore variants actually were developed with X-rays. After preliminary testing a dozen or more hopeful ones were sieved out. Flask

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tests on these indicated surprising possibilities for one culture known as X-1612. More tests in an 80-gallon pilot-plant type of tank were carried out. The tank test which had produced 98 units from NRRL-832 and 169 units from NRRL-1951-B25, produced 369 units with a high of 558 from X-1612.

Cultures of the new strain were at once made available to all penicillin manufacturers and for more than a year it has been the basis of much of the production in the United States.

Meanwhile, two spores of X-1612 were picked out at random, and designated P and Q. From these, two lines of progeny were started and cultured carefully to avoid contamination. The millions of second-generation spores were then exposed to ultraviolet light. The ultraviolet wave length employed was 2650 Angstrom units which is highly effective in producing variants and at the same time highly fungicidal, so that an hour's exposure of 10 cubic centimeter suspensions of each containing from 2,000,000 to 4,000,000 spores killed all but a few of the spores.

It was from among some 500 survivors of the two culture series from the P and Q spores that the test cultures were made. Nothing of great importance appeared until Q176 was reached in the screening test when it was found that the yield from this strain was markedly higher than that from the parent strain X-1612 used as control.

Tank-test charts indicated an average production for Q176 of 761 units with a high of 904, compared with the 369 average established by X-1612.

Research continues for a more efficient penicillin-producer despite the possibility that chemical synthesis of penicillin might eliminate dependence on natural production. (Wisconsin Alumni Research Foundation)

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Abstracts of Reports on Research Projects: (Copies are available upon request.)

X-591 Development of a Garbage Can Washer and Sterilizer for Mess Halls.

Of various models tested, a washer which operates from hot water and steam lines proved most efficient. It was demonstrated by the use of this washer in a mess hall over a period of several months that (1) garbage cans could be rapidly and efficiently cleaned by one man, (2) encrustation of grease and most garbage odors could be eliminated, and (3) the number of flies in and around the garbage room could be notably decreased.

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X-591 (Cont.) Plans are available, and the washer could be constructed and installed in mess halls by the plumbing shop facilities at most naval stations. (Medical Field Research Lab., Camp Lejeune, N.C.)

X-161 Dental Anesthesia Induced by Local Refrigeration.

Histologic investigation of nerves from canine mandibles subjected to continuous local refrigeration at 0° to 1° C. for two-hour periods did not disclose evidence of injury to either the inferior alveolar nerves, or to the nerves of the mucous membrane and periosteum.

Fifty-two cavities were prepared for filling under local refrigeration at 1° to 2° C. in the teeth of 33 members of the naval service. In 34 instances, complete anesthesia was obtained; in 13, very mild to moderate pain was experienced; and in five, there was little or no anesthesia. (N.M.R.I., N.N.M.C., Bethesda 14, Maryland)

X-514 Biological Studies of Antimony Compounds Containing Radioactive Isotopes: Evaluation of the Rhodamine-B Method for the Assay of Antimony in Biological Samples.

The limitations of the Maren modification of the Webster Rhodamine-B microchemical method for the determination of antimony in biological material have been studied by comparing its results with radioactivity measurements on material containing compounds of trivalent and pentavalent radioactive antimony.

The microchemical method proved satisfactory for the analysis of urine, plasma, liver and kidneys having antimony concentrations greater than 0.5 microgram per gram. However, further modification is needed before the method can be used for the analysis of red blood cells, whole blood and spleen. (N.M.R.I., N.N.M.C., Bethesda 14, Maryland)

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Transfer of Enteric Pathogen and Streptococcus Typing Laboratories: During the week of 15 April 1946, the Enteric Pathogen Department and the Streptococcus Typing Department, which since their establishment occupied quarters in the Naval Medical School, were transferred to the Naval Medical Research Institute, National Naval Medical Center, Bethesda, Maryland. These two activities are now incorporated with the Bacteriology Facility at N.M.R.I. which will operate for the present under the supervision of Commander L. A. Barnes, H(S), USNR.

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It is believed that the main original objectives prompting the establishment of the two typing services have been achieved.

A report concerning the type prevalence and distribution of enteric pathogens received during the past three and one-half years is being prepared.

It is contemplated that investigative projects will be initiated concerning the etiology and control of diarrheal disease in the Navy and that problems connected with streptococcal infections will be studied.

Because of the requirements for more rigid adherence to research functions than has existed in the past, it has become necessary to discontinue the routine typing of large numbers of pathogenic enteric bacilli and beta-hemolytic streptococcal cultures heretofore submitted by various naval laboratories within the United States, aboard ships and overseas.

Although routine examination and reporting of routine cultures will be reduced to a minimum, it is requested that subcultures of possible new types or unusual strains of Shigellas, Salmonellas, and beta-hemolytic Streptococci be submitted for further study. Such specimens should be transmitted to the Medical Officer in Command, Naval Medical Research Institute, National Naval Medical Center, Bethesda 14, Maryland, with pertinent clinical bacteriological and epidemiological data. (Research Div., BuMed)

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(Not Restricted)

Continuation of the Rehabilitation Program of the USN: Rehabilitation will be a continuing part of the program of the Medical Department of the Navy in peacetime. The same objectives of the wartime program will be retained although there will be some difference in the content of the peacetime program. The plan to attain these objectives can be uniform throughout hospitals of the Navy because of peacetime conditions. The program will be flexible in its scope so that it will provide adequately for the completion of the treatment of the war casualty cases remaining in the hospitals. A well-integrated rehabilitation program will be required for patients who normally will be admitted to the hospitals of the permanent Navy establishment and special consideration will be given those patients admitted from the Veterans Administration.

The rehabilitation program for the blind will continue as long as it is needed.

The program for the deaf will continue indefinitely, although the staff will be reduced to some extent as the number of patients declines.

The program for the amputees will be a continuing one, and the part of the Bureau of Medicine and Surgery in research in artificial limbs will be

(Not Restricted)

carried on vigorously. Proficient craftsmen will be employed, and a certain number of hospital corpsmen will be trained in this program so that a rotation of reliefs can be provided.

Physical medicine will assume a place of major importance in the medical program. The program will include the specialties of physical therapy, occupational therapy, and physical training. In the training program, medical officers, nurses, hospital corpsmen and those WAVE officers and technicians who can be retained will be especially trained in schools set up in the Navy as well as in civil institutions that have satisfactory postgraduate courses. Civil Service positions will be set up to augment the personnel trained in physical medicine who will remain in the Navy. After the program of training is well established, Navy trained personnel, both officers and enlisted, can be provided for shore stations. Also hospital corpsmen will be trained in the practical applications of physical medicine for duty with amphibious forces as well as units at sea.

A well-rounded training program in physical medicine that will provide competent personnel for all needs has been planned. (Prof. Div., BuMed)

* * * * * *

(Not Restricted)

Army Industrial College Course Open to Lieutenant Commanders, Commanders and Captains of the Medical Corps: The first full-length course at the Army Industrial College since the beginning of the war will convene on 1 September 1946. The course will be of 10 months' duration and will include all phases of planning for industrial mobilization, service and joint service organization, production, procurement, logistics, and the industrial capability of resources and facilities.

Graduates of this course will be qualified particularly for duty in joint Army and Navy activities, staff assignments, and in planning, production and procurement sections of the Bureau of Medicine and Surgery.

Applications for this course are desired from medical officers in the ranks of Lieutenant Commander, Commander and Captain who may have an interest in this type of assignment. Applications should include a statement of agreement to remain in the Service for a period of three years following completion of the course and should be forwarded to the Bureau of Naval Personnel by letter or despatch in time to arrive by 1 June 1946. (Prof. Div., BuMed)

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(Not Restricted)

Transfer of Psychologists to Regular Navy: NAVACT 42 of 10 April 1946 states that requests are desired from qualified reserve and temporary USN officers for appointment as psychologists in the regular Navy. Officers selected will be appointed as line officers until legislation is obtained to change their classification to specialist duty. Only officers and psychologists allied to medicine and those associated with education or personnel are the two general types desired.

Psychologists allied to medicine should be specialists in one of the following: (1) medical research psychology, (2) aviation psychology, and (3) clinical psychology.

Psychologists associated with education or personnel should preferably have had experience in statistics, aptitude and achievement tests, construction, or personality and interest measurement.

It is contemplated that psychologists allied to medicine will be assigned to duty in their respective academic fields, such as in medical research facilities, naval hospitals, and aviation units located throughout the United States. It is contemplated that educational and personnel psychologists will be assigned to duty in connection with personnel research in the Bureau of Naval Personnel and large training commands afloat and ashore including the U. S. Naval Academy.

Applications should be submitted in accordance with BuPers Circular Letters, 288-45 (Revised) and 303-45. Attention is invited to change No. 6 to latter letter which follows:

> Add new paragraph 3 (g.) under heading, "Chief of Naval Personnel - Chief of Bureau of Medicine and Surgery," and "Psychologists."
>
> Add new sentence to end of paragraph 4, "Applicants submitting requests for appointment under paragraph three (g) as psychologists allied to medicine will be required to have a Doctor's degree in psychology from an accredited college or university.
>
> "Applicants submitting requests for appointment under paragraph three (g) as psychologists associated with education or personnel will be required to have a Master's degree in psychology from an accredited college or university."

(Not Restricted)

Note: It is hoped that within the near future arrangements will have been made for the transfer to the Regular Navy of other specialists and that such arrangements will include more favorable age requirements, possibly equivalent to those of the Medical Corps.

Before a definite commitment can be made, legislation will be required to establish the SDO (specialist duty only) designation. This designation will include the specialties allied to medicine desired by the Medical Corps. (Research Div., BuMed)

* * * * * *

(Not Restricted)

Public Health Foreign Reports:

Disease	Place	Date	Number of Cases
Plague	Algeria, Oran	Feb. 23-Mar. 2, '46	1 fatal
	Egypt, Suez	Jan. 5-12, '46	3 fatal
Smallpox	British E. Africa	Jan. 19-Feb. 9, '46	207 (39 fatal)
	Dahomey	Feb. 11-20, '46	191
	Indochina (French), Laos State	Feb. 12-19, '46	9 (1 fatal)
	Morocco (French)	Feb. 11-20, '46	144
	Sudan (French)	Feb. 11-20, '46	109
Typhus Fever	Belgian Congo	Feb. 2-9, '46	112
	Egypt	Jan. 19-26, '46	52
	Morocco (French)	Feb. 11-20, '46	198
	Turkey	Feb. 16-23, '46	83

(Pub. Health Foreign Reps., March 22, '46)

* * * * * *

Changes in the Manual of the Medical Department: Circular Letters 46-65, 46-66 and 46-70 contain changes in the Manual of the Medical Department. This material has been arranged in this issue so that the major changes and additions may be cut from the Bumed News Letter and pasted or stapled directly in the appropriate place in the Manual.

* * * * * *

Circular Letter 46-56 26 March 1946 (Not Restricted)

To: All Ships and Stations.

Subj: Maternity Care in Naval Hospitals and Dispensaries for Members of the Women's Reserves of the Naval Reserve, the Marine Corps Reserve, and the Coast Guard Reserve, and Members of the Navy Nurse Corps and the Nurse Corps, Naval Reserve, Who Have Been Discharged or Separated From the Service While Pregnant.

Refs: (a) SecNav Ltr 15 June 1945 (N.D. Bul, Item 45-612).
(b) Joint BuPers-BuMed ltr 28 Aug 1945 (N.D. Bul, Item 45-1092).

1. References (a) and (b) shall apply to all cases discharged or separated from the service under honorable conditions other than because of pregnancy provided that the condition of pregnancy can be reasonably determined by a reputable civilian physician or naval medical officer as having existed at time of discharge. Such certification shall be accepted in lieu of the letter of the Commanding Officer required by paragraph 3 of reference (a).
--BuMed. Ross T. McIntire.
--BuPers. Louis Denfeld.
--MarCorps. A.A. Vandegrift.

* * * * * *

Circular Letter 46-62 1 April 1946 (Not Restricted)

To: MedOfCom, NavHosps (Continental).

Subj: Physical Examination of Officers Fifty Years of Age and Over.

Ref: (a) BuPers Circular Letter 293-45, 3 Oct. 1945 (N.D. Bull, Item No. 45-1440).
(b) BuPers Ltr Pers-319-JAW, dtd 28 Mar 1946.

Encl: 1. (HW) Copy of Ref (b).

1. In accordance with the provisions of reference (b), those officers who were to be examined in accordance with reference (a) and who failed to appear before the traveling boards are to be examined by boards of medical officers in naval hospitals, convened by the Commandants of Naval Districts and Naval River Commands within the continental United States. These boards are to consist of at least three medical officers and one dental officer.

(Not Restricted)

2. The boards of medical officers referred to above are to examine such officers as are referred thereto in accordance with the provisions of paragraph 6 of reference (a). It is not desired that these boards be convened as statutory boards nor that their reports be submitted formally as required by Naval Courts and Boards as in the case of statutory boards.

3. In the cases of officers who would otherwise be examined as provided in reference (a) and who are on the sick list in a naval hospital, it will be necessary only that a NAVMED-Y, in duplicate, be forwarded in each case with information to the effect that the officer concerned is on the sick list, and including appropriate entry indicating the reason for hospitalization, the probable diagnosis and the prognosis in the case.

--BuMed. Ross T. McIntire.

* *

Enclosure I

(Not Restricted)

From: The Chief of Naval Personnel. 28 March 1946
To: Commandants of Naval Districts and Naval River Commands within the continental United States.

Subj: Physical Examination of Officers Fifty Years of Age and Over.

Ref: (a) BuPers Circular Letter 293-45.

1. In accordance with the provisions of reference (a) Naval and Marine Corps officer personnel of the regular services on the active list who will attain the age of fifty (50) during the calendar year 1946, and those officers over fifty (50) years of age, are being examined by traveling boards of medical officers. In any case where above-mentioned officers fail to appear before either of the traveling boards the Commandants of Naval Districts and Naval River Commands within the Continental United States are hereby directed to convene boards of medical officers in Naval Hospitals, consisting of at least three medical officers and one dental officer, to examine such officers as soon as practicable in accordance with the provisions of reference (a) and such further instructions as may be issued by the Bureau of Medicine and Surgery.

--BuPers. T. L. Sprague.

* * * * * *

Circular Letter 46-63 10 April 1946 (Not Restricted)

To: All Ships and Stations.

Subj: Decreased Potency of Penicillin.

Ref: (a) Alnav No. 158-46.

1. Recent reports indicate a decreased potency in certain lots of the presently available penicillin. This would suggest the advisability of basing the dosage on the therapeutic response.

2. Current clinical and experimental studies of the four fractions of penicillin, namely, F, G, X and K indicate that fraction K possesses the least antibiotic activity. This would account for the decreased potency of certain lots of penicillin which contain as much as 50 per cent of the "K" with a proportionate decrease in the "G" fraction.

3. The fractions of penicillin are identified by their fractionating index only, as practical chemical methods of separation, identification and assay, are not as yet available. This accounts for certain gaps in our knowledge of this antibiotic.

4. The Manufacturers of penicillin are already undertaking the task of improving the potency of penicillin by increasing the proportion of fraction "G" at the expense of fraction "K". However, there is bound to be a lag before this improved product becomes available for distribution.

5. In order most effectively to utilize the penicillin now in stock and under order, possibly containing a high K fraction, the Bureau of Medicine and Surgery recommends that the dosage be based on the therapeutic response.

--BuMed. Ross T. McIntire.

* * * * * *

Circular Letter 46-64 15 April 1946 (Not Restricted)

To: MedOfsCom, NMSD and Officer in Charge, NMSS, Supply Officer in Command, Attn: Officer in Charge, Navy Medical Stores Section
NSD Spokane, Washington
NSD Clearfield, Utah
NSD Mechanicsburg, Pa.

Subj: Inventory Control Program for 1946 (2nd Revision).

Ref: (a) BuMed Cir ltr BUMED:TW:FL, QB/L11-3, 27 Dec 1945.
(b) CNO ltr OP-412C-sr, Serial 72P412, 29 Nov 1945.
(c) BuSandA ltr JO/L11-2(6) (DSI:nr), 14 Dec 1945.

(Not Restricted)

Encl: * 1. (HW) Inventory Schedule.
2. (HW) Inventory Procedures.
3. (HW) Reporting Form on Inventory Progress.

1. Provisions of reference (a) are hereby canceled.

2. Instructions herein apply to all addressees, and deviation therefrom is not authorized.

3. The physical inventory will cover all Navy-owned material except -
(a) Plant Account Material.
(b) Material earmarked and needed for current scheduled construction.
(c) Material earmarked and needed for current repairs and alterations.

4. Enclosure (1) establishes the physical inventory schedule which is mandatory, so as to secure uniformity. Should any activity find due to unusual circumstances, that the schedule cannot be met, a report setting forth the circumstances will immediately be made to Materiel Division, BuMed, Brooklyn, N.Y. so that consideration can be given to modifying schedule for that activity.

5. Procedures outlined in Enclosure (2) shall be followed, and are sufficiently broad for application by addressees.

6. Progress Reports, Enclosure (3), will be submitted on 31 March, 30 June, 30 September and 31 December of each year. Each report will show the following data:

(a) Number of items scheduled to be counted in the entire calendar year and number of items actually counted to the date of the report.
(b) Percentage of items scheduled to be counted, compared to number of items actually counted.
(c) Estimated, (by reporting periods), the total number of man hours scheduled to be required for the entire calendar year, and the man hours expended to the date of the report.
(d) Percentage of man hours estimated to be required, compared to the man hours expended.
(e) Number of personnel engaged by the categories:
(aa) Officers
(bb) Enlisted
(cc) Civilians.

The Progress Reports will be submitted promptly to: Bureau of Supplies and Accounts (DSI), with copies to Chief of Naval Operations (OP-412), District Supply Officer and Materiel Division, BuMed, Brooklyn, N. Y.

--BuMed. Ross T. McIntire.

* Because these enclosures were forwarded with advance copies to the addressees, they are not reprinted here.

Circular Letter 46-65 15 April 1946 (Not Restricted)

(Note: In order to make this Bumed copy better serve its purpose and be of greater practical usefulness, the changes directed in this circular letter are arranged here so that after the lesser corrections have been made, (marginal, etc., with pen and ink), the larger ones can be cut from these pages and pasted or stapled in the appropriate place in the manual. --Ed.)

To: All Ships and Stations.

Subj: Manual of the Medical Department, Advance Changes in.

1. Since the 1945 edition of the Manual of the Medical Department was sent to the printer several changes have been issued in Circular Letters without reference to the Manual. These changes have been compiled and are given below:

PART I, CHAPTER 2B, PAR 12B11.1. Delete, and substitute the following:
TRANSFER OF MEDICAL DEPARTMENT INACTIVE RECORDS AND RECORDS OF DECOMMISSIONED AND INACTIVE SHIPS AND STATIONS — 12B11.1 - When an activity is decommissioned or placed in inactive status the medical department correspondence files and records (except Property Records) shall be properly arranged, packaged in numbered boxes or other suitable containers (numbering of boxes to contain reference to total boxes of shipment, thus: Box No. 1 of 20, box No. 2 of 20, etc.), and each box and container inventoried. Inventories shall be prepared in quadruplicate; one copy to be placed in the appropriate box or container, one copy to be submitted to the appropriate Naval Records Management Center, one copy to be transmitted to the Bureau, and one copy kept aboard the ship or station. After records have been packaged and inventoried, a letter of notification of shipment shall be prepared and sent air mail to the appropriate Naval Records Management Center. This letter shall state the approximate cubic footage and the general character of the records to be transferred, and shall also have attached copies of the inventories of the various records containers. Carbon copies of the letter of notification and inventories shall be sent to BuMed. The packaged records may then be shipped to the appropriate Naval Records Management Center. Naval Records Management Center, 80 Varick Street, New York, N. Y., will serve activities in the First and Third Naval Districts, Naval Records Management Center, Eastern Division, 253 North Broad Street, Philadelphia, Pa., will serve activities in Naval Districts 4 through 10, in the Fifteenth Naval District, in the Severn and Potomac River Naval Commands, and in the European-Africa-Middle East area. Naval Records Management Center, Western Division, 417 South Spring Street, Los Angeles, Calif., will serve activities in Naval Districts 11 through 14, in the Seventeenth Naval District and in the Asiatic-Pacific area.

(Not Restricted)

PART I, CHAPTER 3, SUBPAR 1333.7. Delete, "to the supply officer of the ships or stations, via the medical department property officer, for disposal", and substitute, "to either the Naval Medical Supply Depot, Oakland, Calif., or the Naval Medical Supply Depot, Brooklyn, New York, depending upon whether the port of entry is on the west or east coast respectively."

PART V, CHAPTER I, PAR 5111, PAGE 487. Insert between "transport" and "shall" line 4 the following: "which were formerly hospital ships".

PART V, CHAPTER I, PAR 513, PAGE 475. Delete: NAVMED-621, 622, and 623.

PART V, CHAPTER I, PAR 513, PAGE 478. Delete: ACRO FORM B.

PART V, CHAPTER I, PAR 5127, PAGES 493 and 494. Delete entire paragraph.

PART V, CHAPTER I, PAGE 479, TABLE (Reports Added Since 1 November 1945.) Add: NAVMED-D - Transfer of Property Custody - BuMed - as required - PART VI, MMD - on Form - Insert "X" in all columns except 14.

PART V, CHAPTER I, PAGE 479, TABLE (Reports Added Since 1 November 1945.) Add: NAVMED-949 - Monthly Report of Medical Officers Under Instruction, Other than Interns - Monthly - BuMed - Monthly - Par 5129(A) - Par 5129(A)- place "X" in column 6.

PART V, CHAPTER I, PAGE 479, TABLE (Reports Added Since 1 November 1945.) Add: NAVMED-953 and 953a - Roster Report of the Medical Corps - BuMed - Monthly - Par 5129(B) - Par 5129(B) - Place "X" in column 6.

PART V, CHAPTER 1. Delete: Par 5145.

The following deletions and additions shall be made in the Index to the Manual:

PAGE 507. Delete lines 53, 54, 55, 56, 57, right column.

PAGE 515. Line 18, change 3419.3 to 3419.4, right column.

PAGE 520. Line 44, change 3419.2 to 3419.3, right column.

PAGE 523. Line 11, change 3419.3 to 3419.4, left column.

PAGE 540. Add, preceding line 63, left column; "Reserve to Regular Navy, 2213".

PAGE 551. Add, preceding line 46, right column; "Roster Report of. See NAVMED-953 and 953a".

Add, preceding line 3, right column; "Instruction of Medical Officers. See NAVMED-949".

PAGE 556. Delete lines 42, 43, 44, right column.

(Not Restricted)

PART II, CHAPTER 1, SUBPAR 2152.2. Delete, and substitute the following: 2152.2. A candidate shall not be accepted unless he shall have a minimum of 20 vital serviceable teeth, including four opposed molars, two of which are in functional occlusion on each side of the dental arch and four incisors which are in functional opposition. The soft tissues shall conform to a high standard. The teeth must be free of caries and restorations present must be of a high quality. The deviation from normal occlusion, if any, must be minor and good functional occlusion as well as absence of interference with speech must be demonstrable.

PART II, CHAPTER 2, PAR 2213. Delete, and substitute the following: TRANSFER OF RESERVES TO REGULAR NAVY. - 2213.1. When a Naval or Marine Corps Reserve officer is given the final physical examination for transfer to the regular service, a new NAVMED-H-2 shall be prepared and entered in his health record. The old NAVMED-H-2 shall be closed out, attached to, and forwarded to the Bureau with the carbon copy of the new NAVMED-H-2. The officer's change in status should be noted on his health record cover and on the new NAVMED-H-2, and an entry made on NAVMED-H-8 showing the date, reason for, and results of the physical examination.

2213.2. When an officer of the Nurse Corps Reserve is appointed in the regular service, the original Health Record shall be continued. A new NAVMED-H-2 shall be prepared and entered in the Health Record. The old NAVMED-H-2 shall be closed and retained in the Health Record for comparison and reference. Appropriate notations shall be made on the cover, current NAVMED-H-8's, and on the abstracts.

PART III, CHAPTER 3. Add: Par 3319.13. ENDORSEMENT STATEMENT.-A statement shall be included in the endorsement of the commanding officer, indicating whether the officer has been retained under treatment at the hospital, or if discharged from the sick list, the naval district or local activity to which the officer concerned has been directed to report for temporary duty.

PART III, CHAPTER 4, SUBPARS 3419.2 and 3419.3: Delete, and substitute the following:

3419.2. Remains of Navy, Marine Corps, or Coast Guard personnel who die on or after 1 January 1946 in the Tenth, Fourteenth, Fifteenth, and Seventeenth Naval Districts, or on ships which can transfer their dead to a shore activity in one of these districts, are to be returned to the United States.

3419.3. In all other cases, remains of Navy, Marine, or Coast Guard personnel shall be interred locally. The Navy Department will notify the next of kin upon receipt of the dispatch notification of death addressed to the Secretary of the Navy. All practicable measures shall be taken to preserve the identity of the remains, the records, and the personal effects of the deceased, and to locate definitely and record the burial place by proper geographical data, names, landmarks, charts, etc. Information relative to the identity and location of the deceased shall be prepared and transmitted to the Bureau in triplicate on NAVMED-601. Reference also should be made to paragraph 3413.

(Not Restricted)

PAGE 556. Add, preceding line 45, right column; "Monthly Report of Medical Officers Under Instruction, Other than Interns. See NAVMED-949".

PAGE 563. Add, preceding line 10, left column; "On Transfer to Regular Navy, 2213.1".

PAGE 564. Add, preceding line 14, right column; "NAVMED-D (Transfer of Property Custody), in Tabulation of Report 513".

PAGE 568. Add, preceding line 47, right column; "Endorsement indicating retention for treatment or location of temporary duty, 3319.13".

PAGE 571. Delete lines 39 to 51 inclusive, left column.

Add, following line 18, right column; "NAVMED-949 (Monthly Report of Medical Officers Under Instruction, Other than Interns):
Preparation, submission, etc., 5129(A); in Tabulation of Reports, 513".

Add, preceding line 19, right column; "NAVMED-953 and 953a (Roster Report of the Medical Corps):
Preparation, submission, etc., 5129(C); in Tabulation of Reports, 513".

PAGE 575. Delete lines 7, 8, 9, left column.

PAGE 582. Add, preceding line 48, left column; "Transfer of Custody, Report. See NAVMED-D".

PAGE 586. Delete last three lines, left column, and lines 58 and 59, right column.

PAGE 587. Delete lines 20, 21, 22, right column.

Add, preceding line 54, left column; "Medical Officer under instruction. See NAVMED-949".

PAGE 588. Add, preceding line 53, left column; "Transfer of Property Custody. See NAVMED-D".

Add, preceding line 20, left column; "Roster Report of the Medical Corps. See NAVMED-953 and 953a".

PAGE 589. Add, following line 38, right column; "Roster Report of the Medical Corps. See NAVMED-953 and 953a".

PAGE 597. Delete lines 33, 34, 57, 58, 63, 64, 65, left column.

PAGE 599. Add, preceding line 6, right column; "To Regular Navy from Reserve, Health Record entries, 2213.1".

(Not Restricted)

3419.4. When burial ashore cannot be accomplished within reasonable time limitations or is inadvisable, burial at sea is permissible. Remains shall not be cremated, except as a sanitary measure, without prior approval of the Bureau.

PART III, CHAPTER 5D, PAR 35D16. Delete (a) to (i) after the word "information:" and substitute the following:

(a) Duration of period of exposure.
(b) Whether rescued from boat, raft, or water; if raft, or boat, an indication of the original number of occupants, and the number of survivors.
(c) Temperature of water when rescued.
(d) Adequacy of food, water, first-aid supplies, etc.
(e) Whether survivors made use of an an anti-exposure suit.
(f) Immersion, if any.
(g) Direct exposure to sun.
(h) Type of lesions encountered, together with treatment, subsequent complications, and disposal, with particular reference to underwater blast injuries, dehydration, starvation, "immersion foot," or edema of feet, avitaminosis, furunculosis, and conjunctivitis, the result of sunglare or immersion in oily water.
(i) Rectal temperature of survivor at time of rescue, if exposed to cold.
(j) Psychological condition of survivor.
(k) Brief narrative of experiences, including an estimate by survivors of probable contributing causes of casualties and death.
(l) Other relevant points.
(m) Recommendations of reporting officer or corpsmen relative to action indicated to alleviate suffering and minimize casualties among survivors in future catastrophes.

PART V, CHAPTER 1. Add: Par 5129(A). NAVMED-949 (Monthly Report of Medical Officers Under Instruction, Other than Interns). NAVMED-949 (Monthly Report of Medical Officers Under Instruction, Other than Interns) shall be submitted by continental naval hospitals, in duplicate, to the Bureau by the fifth of each month. No instructions are necessary for the preparation of NAVMED 949.

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(Not Restricted)

PART V, CHAPTER 1. Add: Par 5129(B). NAVMED-953 and NAVMED-953a (Roster Report of the Medical Corps). NAVMED-953 and NAVMED-953a (Roster Report of the Medical Corps) shall be submitted in duplicate by all continental naval hospitals to the Bureau on the first of each month. The completed report shall be submitted via air mail direct to the Bureau, attention Chief of Personnel Division. NAVMED-953 and 953a shall be prepared in accordance with the following instructions.

a. The allowance "authorized" is the allowance authorized by the Bureau of Naval Personnel. These figures are obtainable from NavPers 350. This form is usually on file in the executive officer's office.

b. The allowance "on board" shall be the number of medical officers (include H(S) and H(W) officers), permanently attached to the hospital for duty. Medical officers ordered "under instruction" by the Bureau of Naval Personnel shall not be reported in this space.

c. "Officers Reported or Detached Since Last Report" includes all changes of status of station or status of all medical officers occurring since last report.

d. The term "staff" applies only to medical officer personnel who are a part of the regular hospital complement. It does not apply to any medical officer temporarily attached for any reason. Temporary patients, temporary duty, etc., shall be shown on the reverse of the roster report under the appropriate headings, e.g., "Temporary duty", "Patients" etc. Personnel ordered by the Bureau of Naval Personnel from the staff to "Under Instruction" at the same hospital shall be shown as "detached" to _____ and "reported" for _____ instruction.

e. In making entries in Columns (A), (B), (C), (D), and (E), (under heading "Reported or Detached Since Last Report") consult footnotes at the bottom of the face of the report form.

f. The reverse of the report sheet titled "Remaining at End of Period" shall show the names of staff personnel by groups according to rank. Non-staff personnel shall be listed after staff personnel by classes according to duty status, e.g., "Patients", "Temporary Duty", etc. Group each class by rank and arrange the names in each group alphabetically, surname first. The following instructions apply to individual groups and classes:

(1) Staff officers (MC, H(S), H(W)) - show duty or duties assigned and the original date of reporting.

(2) Patients - list those remaining on board at the end of the period reported. Do not list staff personnel who are patients under this heading.

(Not Restricted)

(3) Temporary duty - list and give date and ship and station from which reported.

(4) Under instruction - list only those placed under instruction by orders of the Bureau of Naval Personnel, giving course, dates of commencement and completion of course.

g. For each column on the reverse side of form the following instruction shall apply:

Column I - Names grouped by rank and in alphabetical order, the surname first, then the Christian name and initials, or all names in full in case two or more have the same surname.

Column II - The rank shall be indicated by abbreviations; if retired, or Naval Reserve, abbreviate as Ret or NR and show classification e.g. MC, H(S), H(W).

Column III - Original date of reporting to hospital for duty, show by figures, e.g., 7-1-44 for 1 July 1944.

Column IV - Beginning of present tour of shore duty. Shore duty begins the date of detachment from sea duty or foreign shore station, show by figures.

Column V - Remarks. In this column, show present duty assignment as "SOQ", "Ch. of Med", "Ch. of Surg", "On Sick List (with diagnosis)", "On Leave (with expiration date)", "Awaiting Transfer to____(this will apply to all Medical Corps Personnel whose orders have been received but who have not been detached as of date of report", "Temporary duty at ____", etc.

Column VI - If specialist, indicate specialty.

h. Wherever the words "Medical officer" are used it includes H(S) and H(W) classifications.

2. Page changes will be prepared on the above advance changes and subsequent advance changes as of 1 July 1946. Page changes will be released for each succeeding six-month period or more often if necessary.

--BuMed. Ross T. McIntire.

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Circular Letter 46-66 15 April 1946 (Not Restricted)

(Note: This Bumed News Letter copy of this circular letter is purposely reproduced here in a manner that lends itself to removal and insertion by pasting or stapling in the appropriate section of the Manual. --Ed.)

To: All Ships and Stations.

Subj: Advance Change in the Manual of the Medical Department Concerning Embalming and Preparation of Remains for Return from Overseas.

Refs: (a) BuMed Cir Ltr No. 46-4, 4 Jan 1946.
(b) Par. 3420, M.M.D.
(c) Par. 3421, M.M.D.

1. The following advance change in the revised edition of the Manual of the Medical Department is published for the information of all concerned and is effective immediately:

2. In paragraph 3420 add the following subparagraph:

3420.4 OVERSEAS SHIPMENT. At stations beyond the continental limits or aboard ships in distant waters and when the body is to be returned to a naval activity in the United States, or within the United States when the body is to be shipped to a naval activity abroad, after completion of the embalming, the following additional procedures shall be followed in preparing the body for shipment, using either method A or method B as may be more practicable:

(a) When time permits, the body shall lie for several days to permit drying out, the escape of fluids, and discovery of imperfectly hardened areas. Repeated sponging with alcohol will assist dehydration.

(b) Method A. PICKLING. Do not clothe the body, but wrap in absorbent cotton dripping wet with 10 per cent formalin, and then snugly bandage the whole body.

(c) Method B. SPRAYING. Do not clothe the body. Remove any mold already in evidence with a weak solution of ammonia in alcohol. Wipe over skin surfaces with the thymol solution given below. Using an insecticide spray or atomizer, spray skin surfaces with same solution. (It is advised that operators wear respiratory masks.) Wrap body in dry absorbent cotton, secured by bandages. When placed in casket,

(Not Restricted)

spray wrapped body and all casket fabrics. The following formula will be found suitable as a fungicide and for preservation of skin, while having little effect on appearance and no action on fabric or dyes.

	cc or grams
Thymol	5.0
Eugenol	2.0
Petrolatum	5.0
Chloroform (sufficient to make)	100.0

(d) Wrap clothing in an impervious, waxed paper, and pack securely on top of casket inside shipping case.

(e) If funeral services are to be held prior to shipment, the above procedures will be carried into effect after the services.

(f) If, for any reason, the remains are not to be handled by a naval activity at port of arrival, method B will be followed, except that the body shall be fully dressed, and, as a final step, the spray applied to the clothed body in the same manner as to a bandaged body.

3. In paragraph 3421, after the word "Clothing" and before the word "Each" insert the following: "Except as directed in 3420.4," changing the capital "E" to lower case.

4. Paragraph 2 of reference (a) is hereby cancelled and is superseded by the instructions contained in the above change in the manual. It is directed that this letter be kept with the manual until printed change is received.

--BuMed. Ross T. McIntire.

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Circular Letter 46-67 15 April 1946 (Not Restricted)

To: AlNavStas.

Subj: Transfer of Officers of the Nurse Corps, U. S. Naval Reserve, to Nurse Corps, U. S. Navy during Terminal Leave or First Six Months on Inactive Status.

Ref: (a) AlNav 271-45, 279-45, 283-45, 104-46.

1. An officer of the Nurse Corps, U. S. Naval Reserve, who is in a terminal leave status or who has been in an inactive duty status for less than six months, may request transfer to the Nurse Corps, U. S. Navy.

2. Qualifications for transfer are as follows:

(a) Age - maximum, not over the age to complete 20 years active duty prior to 58th birthday including active duty as U. S. Naval Reserve.

(b) The educational and professional qualifications of all officers of the Nurse Corps, U. S. Naval Reserve are considered adequate to warrant submission of application to BuMed for review.

3. Applicant shall report to Commandant of nearest Naval District or River Command by letter or in person (not by telephone), stating desire to transfer.

4. If applicant is on terminal leave and requests retention on active duty the Commandant shall cancel remainder of release orders and reassign her to duty pending Bureau orders, allowing delay in reporting for duty until date of termination of original terminal leave if desired. Application for transfer in accordance with AlNavs 279-45 and 271-45 shall be submitted as soon as applicant reports for duty. If retention on active duty is not requested, procedure shall be same as outlined in Para. 5.

5. If applicant is on inactive duty status the Commandant shall direct her to the Medical Activity nearest her home authorized to conduct a physical examination for officers of the Nurse Corps, in accordance with AlNav 271-45 and submit to BuMed her properly executed application in accordance with AlNav 279-45. If officer desires recall to active duty prior to the date of her final appointment in the Nurse Corps, U. S. Navy, the request shall be submitted to the Bureau of Medicine and Surgery via the Commandant of the District. If

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circumstances permit and a billet is available, orders will be issued for her to proceed from her home to the new duty station.

6. This letter does not in any way affect the transfer of Reserve Nurses on active duty to the regular Nurse Corps.

--BuMed. W. J. C. Agnew.

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Circular Letter 46-68 15 April 1946 (Not Restricted)

To: All Ships and Stations.

Subj: Medical Stores Requisition, NAVMED 4; Preparation and Submission of.

Ref: (a) Articles 1164, and 1166, Navy Regulations.
(b) BuMed Cir ltr No. 44-18, 28 Jan 1944.
(c) BuMed Cir ltr No. 45-92, 15 Apr 1945.
(d) BuMed Cir ltr No. 46-48, 27 Feb 1946 (N. D. Bull, Item 46-461.

1. Effective 1 July 1946 reference (c) is superseded by this letter.

2. Effective 1 July 1946, requisitions for medical stores listed in the Catalog of Naval Material, Bureau of Medicine and Surgery Section shall be prepared in quintuplicate on NavMed-4 (requisition and invoice for medical supplies and equipment) in accordance with instructions contained herein and the original and three copies submitted to the nearest medical supply depot or storehouse.

3. A separate NavMed-4 requisition shall be prepared for the following groups of items:

(a) Items of Supplies (expendable)
(b) Items of Equipment (non-expendable)
(c) Biologicals, except Serum Albumin.
(d) Precious metals for dental use.
(e) Other dental items.
(f) All items not listed in the Catalog of Naval Material, BuMed Section.
(g) Items required in emergency or in advance of routine shipments.

4. Medical Supply Depots are located at Brooklyn, 1, N. Y.; Oakland, California;

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Pearl Harbor, T.H.; Guam-Saipan, M.I., and Balboa, C.Z. Continental Medical Supply Storehouses are located at Newport, R.I.; Norfolk, Va.; Charleston, S.C.; Seattle, Washington; San Pedro, California and San Diego, California. An Extra-Continental Medical Supply Storehouse is located at Samar, P.I.

5. The Responsibility Lists for medical material of Naval Medical Supply Depots; Naval Medical Supply Storehouses (Continental); Naval Medical Supply Storehouses (Extra-Continental); and Service Force Floating Storage (Barges, AK and AKS) are as follows:

(a) Naval Medical Supply Depots - All items of the Catalog of Naval Material, Bureau of Medicine and Surgery Section.

(b) Naval Medical Supply Storehouses (Continental) - Items listed in the supplement to the Catalog of Naval Material, Bureau of Medicine and Surgery Section "Items Stocked in Continental Naval Medical Supply Storehouses."

(c) Naval Medical Supply Storehouses (Extra-Continental) - Items listed in the supplement to the Catalog of Naval Material, Bureau of Medicine and Surgery Section " Items Stocked in Extra-Continental Naval Medical Supply Storehouses."

(d) Service Force Floating Storage (Barges, AK and AKS Ships) - As determined by the Service Force Commander. List of items may be obtained from such floating facilities.

6. Timely submission of requisitions shall be made in anticipation of needs. Except in emergencies, medical stores shall not be requested by dispatch. No confirming NavMed-4 is required when medical stores are requested by dispatch. Regular replenishment items shall be requisitioned quarterly by hospitals and large activities. Biologicals and other deteriorable items (Drugs, film, batteries, rubber goods, etc.) shall be requisitioned to cover limited requirements rather than to create unnecessarily large reserve stocks.

7. Requisitions shall be prepared for medical stores in accordance with the following instructions. The data required in sub-paragraphs (a) to (l), inclusive, shall be entered on each sheet of the requisition.

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FACE (NAVMED-4)

(a) U.S:.....Enter the official name of the requisitioning activity and the mail address. Vessels shall enter class and number after name. Example: (BB6).

(b) DATE:.....Enter the date prepared.

(c) REQUISITION NO:..... Requisitions shall be numbered consecutively in a separate series for each fiscal year, preceded by the letters "S.D." and followed by the last two digits of the fiscal year. Example: S.D.-1-40, S.D.-2-40, S.D.-3-40, etc.

(d) ALLOTMENT NUMBER:.....Leave blank.

(e) TOTAL ALLOTMENT:.....Leave blank.

(f) PREVIOUSLY OBLIGATED: ....Leave blank.

(g) ESTIMATED COST THIS REQUISITION:....Leave blank.

(h) AVAILABLE BALANCE:.....Leave blank.

(i) AVERAGE COMPLEMENT:....Enter average of persons entitled to naval medical treatment except when prohibited by security instructions. Continental activities shall show the number of service personnel after the symbol (S): the number of civil personnel after the symbol (C): and hospitals the number of patients after the symbol (P).

(j) ACCOUNT NUMBER:.....Enter the accounting number assigned the ship or station appearing in the "LIST OF ACCOUNTING NUMBERS FOR SHIPS AND STATIONS", published by the Bureau of Supplies and Accounts. This number may be obtained from the supply officer.

(k) RESERVE FOR NMSD, BROOKLYN:.....Leave blank.

(l) CODE NUMBER:.....Enter code number assigned to your activity as indicated on previous requisitions.

(m) BOX NUMBER:.....Leave blank.

(n) ITEM NUMBER:.....Each item of the entire requisition shall be numbered consecutively, beginning with 1.

(o) STOCK NUMBER:.....The stock number of each item, as indicated in the Catalog of Naval Material, BuMed Section, shall be entered in this column on the same line on which the name of the item begins. Items and stock numbers shall be arranged in the exact order in which they appear in the catalog. The stock class number and name shall be typed at the head of each class of items requested. Double space shall be left between each class of items.

(p) ITEM:..... List each item requested, beginning on the same line with the stock number, exactly as shown in the catalog, except that information beyond colon (:) may be omitted.

(q) UNIT:.....Enter on the same line with the stock number and the first line of the item description, and "unit of

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issue'' as stated in the catalog (''Each'', ''Pair'', ''Dozen'', ''Pkg'', ''Bottle'' etc.)

(r) MINIMUM STOCK:.....Substitute the words ''on order, not received''. Enter quantities previously requisitioned but not yet received.

(s) ON HAND:.....Enter the quantity of the item actually on hand. Material expended from the stock ledger, such as part bottles, etc., in the pharmacy, is not to be included.

(t) REQUIRED:.....Enter the quantity required.

(u) VALUE:.....Leave blank.

(v) PAGING:.....When the listing of items required exceeds one sheet, each sheet shall be serially numbered near the bottom (Example: 1 of 4, 2 of 4, 3 of 4 etc.) Secure in sets with paper fastener, all originals, all second copies, etc.

(w) SIGNATURE:.....Requisitions from ships and stations shall be signed by the senior medical department representative (from hospitals by the accounting officer) and approved and forwarded by the Commanding Officer. Signatures are required only on the original copy of the first page of the requisition.

(x) COPIES, DESIGNATION OF:...The requisitioning activity shall designate the respective copies as follows:

Ribbon copy:	''Original''
Duplicate:	''Second''
Triplicate:	''Third''
Quadruplicate:	''Fourth''
Quintuplicate:	''Fifth'' (file copy - retain)

REVERSE (NAVMED-4)

(y) SHIPPING INFORMATION:.....The second copy will accompany the bill of lading.

(z) EXPLANATION REMARKS:.....Indicate urgent need and specific delivery dates and places desired. State need for apparent large quantities of supplies or additional items of equipment. Explain need for non-listed items and the reason catalog items will not suffice. Enter reference to property survey when requesting replacement of equipment.

8. NONLISTED ITEMS: When medical stores (supplies and equipment), not listed in the Catalog of Naval Material, Bureau of Medicine and Surgery Section, are required, a separate NavMed-4 requisition shall be prepared and forwarded

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to the Materiel Division, Bureau of Medicine and Surgery, Sands and Pearl Sts., Brooklyn 1, N. Y. The same procedure shall be followed in the preparation of NavMed-4 requisitions for nonlisted items as that outlined in paragraph 7 above, except under "Stock No." the appropriate class shall be substituted for stock number. Example: "NL-3", "NL-5", etc. When replacement parts or accessories for X-ray, electrically operated, or other equipment are required, an adequate description of the part of the equipment item for which the part is required, or with which the accessories are to be used, must be stated, including the make, model, serial number, or such description as may be available, including electric-current data, when indicated, in order to enable the Materiel Division to accurately determine the material required. Requisitions for nonlisted books shall state the exact title, author, edition, and publisher's name. Incomplete description of nonlisted material necessitates considerable needless correspondence and procurement delays. As a general rule, in the case of nonlisted material, several makes of an item are available in the market, and competitive bidding is required. Therefore, commercial catalog references must be construed as descriptive but not restrictive, unless sufficient justification is furnished for proprietary purchase. Each requisition for nonlisted (noncatalog) items shall be accompanied by a statement explaining why catalog items will not meet the requirements or answer the purpose. Prepare six and forward five copies of NavMed-4 for NL items.

9. TRANSFER REQUISITIONS:

9.1 For Shore Stations: Items of medical stores deleted from shore stations requisitions with symbol "T" will be backordered by Medical Supply Depots on medical stores transfer requisition (NavMed 574) and issued when material becomes available. Naval Medical Supply Storehouses shall cancel out of stock items from requisitions and advise requisitioning activities to re-requisition these items from the nearest Naval Medical Supply Depot in accordance with existing instructions.

Transfer requisitions on hand, but not processed, on 30 June of each fiscal year will be automatically cancelled by Naval Medical Supply Depots without reference to requisitioning activities. Items so cancelled and still required shall be re-requisitioned.

9.2 For Ships:

(a) Active and Reserve Fleets: Out of stock medical stores items will not be backordered from active and reserve ships replenishment requisitions by Medical Supply Depots and Medical Supply Storehouses. Items not

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available for issue shall be deleted and reported by letter to the ships with instructions to requisition items from the nearest Medical Supply Depot or Medical Supply Storehouse as applicable.

(b) Inactive Fleets: Items of medical stores requisitioned by ships of the inactive fleet (ships being inactivated) and which are not available, shall be deleted from such requisitions with symbol "T", backordered and shipped when material becomes available.

10. INVOICES - NAVMED 255 AND 259: Upon receipt of requisitions (NavMed-4), depots and storehouses shall mechanically re-produce sufficient numbers of copies of Medical Stores Invoices, NavMed 255 (a form consisting of an original and five attached copies) for domestic shipments or NavMed 259 (a form consisting of an original and eight attached copies) for overseas shipments, to cover all conditions of shipment. Each invoice shall show quantities shipped, unit prices, extensions, class totals, and grand totals. Distribution of copies of NavMed 255 shall be made as follows:

Original:	To the requisitioning activity for receipt and return to the issuing activity for transmittal to Materiel Division.
Second:	To the Materiel Division for transmittal to Finance Division, BuMed-mail as soon as completed.
Third:	To the requisitioning activity for its files.
Fourth:	To the Materiel Division with second copy.
Fifth:	For use in preparing transfer requisitions.
Sixth:	For issuing activity's files.

Distribution of copies of NavMed 259 (formerly NavMed 255-0), shall be the same as for NavMed 255 except that the seventh, eighth, and ninth copies shall be used as additional information copies for consignees and transshipping agencies. NavMed 255 will not be submitted for non-listed items. Accounting instructions for non-listed items are contained in reference (d).

11. COPIES OF INVOICES FOR BUMED: All copies of Medical Stores Invoices, NavMed 255 and 259, required by BuMed will be supplied by Medical Supply Depots and Storehouses preparing them. Requisitioning activities shall not send to BuMed after receipts of stores any priced and extended copies of NavMed-4, NavMed-255 or NavMed-259.

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12. SHORTAGES, LOSS, DAMAGE, ETC. OF MEDICAL STORES: Upon receipt of a shipment, if any apparent shortage, overdelivery, or other error is found in comparing the invoice or packing copy of the requisition, a full report thereof shall be made to the issuing depot or storehouse. If the issuing activity does not accept responsibility for the discrepancy, the stores shall be taken up as invoiced and shortages adjusted on the books of the receiving activity by expending supplies or surveying equipment (NR, ch. 49. sec.III). In case of missing narcotics, comply with reference (b). When medical stores are lost or damaged by a Government or Commercial carrier, the procedures outlined in Article 1903 of the BuS&A Manual and Article 1840-5 of BuS&A Memoranda, shall be complied with. When medical stores in transit are lost by enemy action the procedures outlined in Article 1120(4) and 1130(6), BuS&A Manual, shall be complied with. Receiving activities shall not alter or change invoice in any manner unless so authorized by the issuing depot, storehouse or Materiel Division, Bureau of Medicine and Surgery.

--BuMed. W. J. C. Agnew.

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Note: See page 44 for Circular Letters 46-69 and 46-70.

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(Not Restricted)

Disestablishment of Naval Medical Activity. As published in the Navy Department Semimonthly Bulletin of 31 March 1946, the following Naval Medical activity was disestablished as of the date shown:

Name	Address	Date of disestablishment
U.S. Naval Hospital	Corvallis, Oregon	31 May 1946

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(Not Restricted)

Establishment of U. S. Naval Medical Center, Guam, Marianas Islands, and Subsidiary Components.

To: All Ships and Stations. Op24B-pd
Serial 395P24

Subj: U. S. Naval Medical Center, Guam, Marianas Islands, and Subsidiary Components - Establishment of. 15 March 1946

Ref: (a) SecNav ltr. Op24B-pd, serial 245P24, of 4 Jan. 1946; N. D. Bul. of 15 Jan. 1946, 46-15.

1. A U. S. Naval Medical Center is hereby established at Guam, Marianas

(Not Restricted)

Islands, under a Medical Officer in Command, and designated as follows:

U. S. Naval Medical Center,
Guam, Marianas Islands
Mail Address
Navy 926 (nine-two-six),
FPO San Francisco, California. 4170-400

This Medical Center comprises the major naval medical and associated activities which are now in operation at Guam, Marianas Islands, and is under the military command and coordination control of the Naval Military Government Administration, and is under the management and technical control of the Bureau of Medicine and Surgery.

2. The U. S. Naval Hospital, Guam, Marianas Islands, redesignated by reference (a), is hereby further redesignated, under a Medical Officer in Command, as follows:

U. S. Naval Hospital,
Naval Medical Center,
Guam, Marianas Islands
Mail Address
Navy 926 (nine-two-six),
FPO San Francisco, California. 3435-348

This is a subordinate unit of the U. S. Naval Medical Center, Guam, Marianas Islands, and is under the management and technical control of the Bureau of Medicine and Surgery.

3. The U. S. Naval Medical Research Unit #2, Guam, Marianas Islands, is hereby redesignated, under a Medical Officer in Command, as follows:

U. S. Naval Institute of Tropical Medicine,
Naval Medical Center,
Guam, Marianas Islands
Mail Address
Navy 926 (nine-two-six),
FPO San Francisco, California. 3655-400

This is a subordinate unit of the U. S. Naval Medical Center, Guam, Marianas Islands, and is under the management and technical control of the Bureau of Medicine and Surgery.

(Not Restricted)

4. The Military Government Hospital #203, Guam, Marianas Islands, is hereby redesignated, under a Medical Officer in Command, as follows:

Guam Memorial Hospital,
U. S. Naval Medical Center,
Guam, Marianas Islands
Mail Address
Navy 926 (nine-two-six),
FPO San Francisco, California. 3455-350

This is a subordinate unit of the U. S. Naval Medical Center, Guam, Marianas Islands, and is under the management control of the Naval Military Government Administration, and is under the technical control of the Bureau of Medicine and Surgery.

5. A school for training of native medical practitioners is hereby established, under a Medical Officer in Command, and designated as follows:

School of Medical Practitioners,
U. S. Naval Medical Center,
Guam, Marianas Islands,
Mail Address
Navy 926 (nine-two-six)
FPO San Francisco, California. 7563-400

This is a subordinate unit of the U. S. Naval Medical Center, Guam, Marianas Islands, and is under the management control of the Naval Military Government Administration, and the technical control of the Bureau of Medicine and Surgery.

6. A school for training of native nurses is hereby established, and designated as follows:

School of Nursing,
U. S. Naval Medical Center,
Guam, Marianas Islands
Mail Address
Navy 926 (nine-two-six),
FPO San Francisco, California. 7621-400

This is a subordinate unit of the Guam Memorial Hospital, and is under the technical control of the Bureau of Medicine and Surgery.

(Not Restricted)

7. Bureaus and offices concerned take necessary action.

--SecNav. James Forrestal.

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Circular Letter 46-69 16 April 1946 (Not Restricted)

To: All Ships and Stations.

Subj: Report of Physical Examination for Transfer to Fleet Reserve.

Ref: (a) Paragraph 21118.3, Manual of the Medical Department (1945).

1. Reference (a) provides that when an enlisted man of the Navy is examined for transfer to the Fleet Reserve a report of the physical examination shall be submitted to the Bureau. If the man is physically qualified for duty at sea, this report shall be submitted on NavMed-Y, but if the man is not physically qualified for duty at sea, this report shall be submitted on NavMed-M.

2. Reports of physical examination for transfer to the Fleet Reserve are being submitted to the Bureau on NavMed-Y finding personnel not physically qualified for duty at sea but physically qualified for transfer to the Fleet Reserve.

3. Attention of all medical officers is directed to the provisions of reference (a) and to the fact that the submission of NavMed-M is necessary whenever an individual is examined for transfer to the Fleet Reserve and found not physically qualified for duty at sea.

--BuMed. Ross T. McIntire.

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Circular Letter 46-70 18 April 1946 (Not Restricted)

(Note: The change in the Manual of the Medical Department herein directed may be accomplished by cutting out the applicable paragraph below and using it directly for insertion in the manual. --Ed.)

To: MedOfCom, NavHosps and NavDisps (Continental and 10th, 14th, and 15th NDs).

(Not Restricted)

Subj: Veterans Administration Beneficiaries; Hospitalization of Emergent Cases.

Ref: (a) Par 4150 Manual of the Medical Department, 1945.

Encl: * 1. (HW) Addresses of Veterans Administration Centers and Regional Offices.

1. The hospitalization of eligible Veterans Administration beneficiaries in any naval hospital, when they are emergent cases and in need of immediate hospitalization, is hereby authorized by this Bureau in response to request for such authority from the Veterans Administration.

2. This authorization is without regard to, and separate from, authorized bed allocations in certain naval hospitals for beneficiaries of the Veterans Administration and is for the purpose of establishing procedure whereby, under regulations of the Veterans Administration, reimbursement may be made for such hospitalization at the reciprocal per diem rate.

3. Notification of such admissions should be made to the nearest Veterans Administration Center or Regional Office within 24 hours. The location of the various Centers and Regional Offices is enclosed herewith.

4. Attention is invited to reference (a) regarding Veterans Administration beneficiaries admitted to naval hospitals.

5. In accordance with the above, the following subparagraph shall be added to ref (a):

4150.8. Emergent cases of eligible Veterans Administration beneficiaries may be hospitalized in any naval hospital when in need of immediate hospitalization. Notification of such admission shall be made to the nearest Veterans Administration Center or Regional Office within 24 hours. Reimbursement for hospitalization of these emergent cases shall be the same as for those who have prior authorization.

--BuMed. Ross T. McIntire.

* Because this enclosure was forwarded with advance copies to the addressees, it is not reprinted here.

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